



## Uncertainty in adaptive capacity and the importance of scale

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### Abstract:

Understanding different adaptive capacities is a prerequisite for targeting interventions to reduce the adverse impacts of climate change. Indicators and indices are common tools in this process, but their construction embodies many uncertainties, not least of which is their scale specificity. This paper describes the development of two empirical adaptive capacity indices for use at different scales of analysis: a national index for cross-country comparison in Africa and a household index for cross-household comparison in a village in Limpopo province, South Africa. Explaining the decisions made at each stage of construction illuminates the degree of uncertainty involved when assessing adaptive capacity, and how this uncertainty is compounded when looking across different scales of analysis. It concludes that the central elements of adaptive capacity, based on institutional collective response and the availability of and access to resources, are common at different scales, although the structure of each index is scale-specific. Hence the findings of these apparently irreconcilable scales of analysis converge to demonstrate points of leverage for policy intervention to raise resilience and the capacity to adapt to the risks posed by climate change. © 2006 Elsevier Ltd. All rights reserved.

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### Resource Description

#### Communication:

resource focus on research or methods on how to communicate or frame issues on climate change;  
surveys of attitudes, knowledge, beliefs about climate change

A focus of content

#### Communication Audience:

audience to whom the resource is directed

Policymaker

#### Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Security

#### Geographic Feature:

# Climate Change and Human Health Literature Portal

resource focuses on specific type of geography

Rural

## **Geographic Location:**

resource focuses on specific location

Non-United States

**Non-United States:** Africa

## **Health Impact:**

specification of health effect or disease related to climate change exposure

General Health Impact

## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation

## **Population of Concern:** A focus of content

## **Population of Concern:**

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status, Workers

**Other Vulnerable Population:** Pre-existing medical condition; Social isolation

## **Resource Type:**

format or standard characteristic of resource

Research Article, Research Article

## **Resilience:**

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

## **Timescale:**

time period studied

Time Scale Unspecified

## **Vulnerability/Impact Assessment:**

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content